

REMARKS

Review and reconsideration of the non-final Office Action mailed December 17, 2009 (the "Office Action"), is respectfully requested in view of the above amendments and the following remarks. Although no additional fees are believed due, the Commissioner is hereby authorized to charge any deficiency or credit any surplus to Deposit Account No. 14-1437.

At the time of the Office Action, claims 1, 7-18, 21-29 and 31-35 were pending, with claims 1, 4, 7-18, 21-23 and 31-35 being drawn to an elected invention. All claims were rejected under 35 U.S.C. §103(a). By this Amendment, claim 1 is amended, claims 21-23 & 32-35 are canceled, and claim 36 is added. Claim 1 is amended to add the subject matter of claims 21-23. Support for the subject matter of new claim 36 can be found throughout the specification. *See, e.g.*, claims 7 and 15. No new matter is added.

Claims 32-35 were cancelled because they were identical to other pending claims. It should be noted that the cancelled subject matter is not meant to be disclaimed because the same subject matter remains in the pending claims and is believed to be patentable over the cited references.

The amendments presented herein have been made solely to expedite prosecution of the instant application to allowance and should not be construed as an indication of Applicants' agreement with or acquiescence to the Examiner's position. Accordingly, Applicants expressly maintain the right to pursue broader subject matter through subsequent amendments, continuation or divisional applications, reexamination or reissue proceedings, and all other available means. The amendments and rejections are addressed below in more detail.

Interview Summary

Applicants wish to thank Examiner O'Hern to granting the courtesy of a telephonic interview on March 10, 2010. During the interview, the cited references and proposed claim amendments were discussed. Although no formal agreement was reached, Examiner O'Hern agreed to grant further consideration of the claim amendments and arguments once a formal response was filed.

Claim Rejection - 35 U.S.C. §103

Claims 1, 7-12, 17-18, 21-22 and 31-35 are rejected under 35 U.S.C. §103(a) as being obvious in view of GB 1057840 (hereinafter “GB”) in view of Japanese Publication No. 2003-144050 by Okada *et al.* (hereinafter “Okada”); and Claim 23 is rejected under 35 U.S.C. §103(a) as being obvious in view of GB and Okada, further in view of U.S. Patent No. 6,231,907 by Kino *et al.* (hereinafter “Kino”). As noted above, claim 1 is amended to incorporate the subject matter of claim 23, so the rejection of claim 23 is addressed. Prior to addressing the cited references, Applicants wish to review the subject matter of amended claim 1, which is drawn to:

1. (currently amended) A method of extracting volatile components applicable for a food or drink by which volatile components are obtained by steam extraction of tasty materials, the method comprising:
 - directing steam produced from deoxygenated water into contact with the tasty material, wherein the directing is carried out within a sealed container under an inert gas atmosphere;
 - recovering the steam after said directing steam ~~into contact~~, wherein the steam extraction is carried out using super heated steam that is set to a temperature higher than 140°C but no higher than 500°C, wherein a steam flow rate of 0.3 to 30 kg/h is used per 1 kg of tasty material, wherein said directing ~~into contact~~ steam is carried out for 5 to 30 ~~[[60]]~~ minutes, wherein a recovery rate of the volatile components by the steam extraction is 0.01 to 10% by weight as a solid with respect to the tasty material, and wherein the super heated steam is used at normal pressure;
 - obtaining an aqueous extract by water extraction of the tasty material following the steam extraction; and
 - mixing the aqueous extract and the volatile components.

Amended claim 1 is drawn to a method of extracting volatile components obtained by steam extraction from tasty materials. The method includes directing steam into contact with the tasty material; and recovering the steam after directing the steam into contact with the tasty material. The steam is produced from deoxygenated water and is directed into contact with the tasty material within a sealed container under an inert gas atmosphere. The steam extraction is carried out using super heated steam at normal pressure (*i.e.*, one atmosphere) that is set to a temperature higher than 140°C but no

higher than 500°C and the steam flow rate is 0.3 to 30 kg/hr per 1 kg of tasty material. The directing step is carried out for 5 to 30 minutes and the recovery rate of the volatile components by the steam extraction is 0.01 to 10% by weight as a solid with respect to the tasty material. Following the steam extraction, an aqueous extract of the tasty material is obtained. The aqueous extract and the volatile components are then mixed.

As explained in the Specification, it was discovered that the newly added features are important to producing superior flavor quality. Deviations from the claimed method result in inferior products. *See* Specification, Page 7, ln. 28 – Page 8, ln. 28.

GB is drawn to a process for preparing a coffee extract powder that includes steaming a portion of ground, roasted coffee and obtaining a distillate. GB, Page 2, Example. The steamed coffee is combined with unsteamed coffee and a water extract of the mixture is obtained. *Id.* A portion of the extract can be subjected to spray drying. *Id.* The remainder of the extract can be concentrated and added to the distillate. *Id.* The extract-distillate mixture can then be freeze dried. *Id.* The spray dried portion and the freeze dried portion can then be mixed.

GB does not provide any detail regarding the source or temperature of the steam, and certainly does not discuss superheated steam. In addition, GB does not disclose anything about the type of container or atmosphere used for the steam distillation process.

Okada discloses a method for removing unpleasant smells derived from raw coffee beans to produce roasted coffee beans where undesirable smells are removed using steam at a temperature ranging between 200°C and 400°C. Okada, Paragraph [0010]. As described in paragraph [0034], saturated vapor having a pressure of 2 to 5 kPa gauge is heated to 300 °C to generate high temperature heating steam. Coffee beans are roasted by the high temperature heating steam for a period of time from 5 minutes, 30 seconds to 9 minutes, 30 seconds as shown in Table 1. According to the description of paragraphs [0045]-[0047], coffee drinks extracted from the coffee beans previously processed by the high temperature heating steam do not have an unpleasant smell.

Okada discloses the use of high temperature steam at an atmospheric pressure for removing unpleasant smells from raw coffee beans. As Okada deals with removal of undesirable smells, Okada

emphasizes that in order to produce “savory roast coffee beans,” the heated steam contacted with the raw coffee beans is discharged to the atmosphere without steam recycling. Okada, Paragraph [0014], [0018], [0019] & [0027]. From this it is clear that the steam in Okada extracts unpleasant smells and that the unpleasant smells extracted from the coffee beans would not be used to flavor food or drinks. Thus, Okada's method is completely different from the claimed method and fails to disclose or suggest the claimed features.

Furthermore, a person of ordinary skill in the art would understand that the settings and considerations used to remove undesirable flavors from raw coffee beans (*i.e.*, develop desirable flavors in the coffee beans), as in Okada, are completely different from those used to extract desirable flavors from roasted coffee grounds, as in GB. The roasting process disclosed in Okada is used to remove undesirable flavors from raw coffee beans, while *retaining desirable flavors in the roasted coffee beans*. In contrast, the extraction process of GB is used to extract desirable flavors from roasted coffee grounds. Thus, a person of ordinary skill in the art would understand that the conditions disclosed in GB and Okada are different because they are used for completely different purposes and would believe that what works for purposes of Okada (retaining flavors while roasting raw coffee beans) would not work for purposes of GB (extracting flavors from roasted coffee beans).

In summary, GB discloses steam distillation (presumably standard steam) can be used to extract desirable volatile components from roasted coffee grounds, while Okada teaches that undesirable components are removed, or stripped, from raw coffee beans by contacting them with steam at higher temperatures. In fact, Okada teaches that the higher temperature steam distillate should be discharged to the atmosphere and that steam recycling should be avoided so that the undesirable smells are eliminated from the raw coffee beans. Thus, Okada clearly teaches away from the claimed process, which recovers super heated steam at a temperature higher than 140°C but no higher than 500°C that has contacted the tasty material. Accordingly, there would be no motivation to combine the cited references in order to produce the claimed method.

Kino discloses using deoxygenated water coffee processing for the purpose of providing high quality coffee. Kino discloses that such processes can use water temperatures falling between 0 and

130°C. *See* Kino, Col. 5, ln. 21-33. Kino indicates that temperatures above 130°C are undesirable because they produce acrid, bitter and rough tastes. *See* Kino, Col. 4, ln. 57 – Col. 5, ln. 4. Thus, just like Okada, Kino teaches away from the claimed process, including the claimed superheated steam and the claimed temperature range thereof.

In addition, numerous dependent claims are drawn expressly to tea or roasted coffee beans. A person of skill in the art would not apply the teachings of GB, which deals with roasted coffee grounds, to the claimed methods related to tea or roasted coffee beans.

Clearly, no combination of the cited references, whether alone or in combination, discloses or suggests the claimed method. Furthermore, the cited references teach away from the claimed method and fail to disclose important limitations. In view of the foregoing, it is respectfully requested that the rejection based on the combination of GB, Okada and Kino be withdrawn.

Claims 13-14 are rejected under 35 U.S.C. §103(a) as being obvious in view of GB and Okada, further in view of U.S. Patent No. 5,417,993 by Takano (hereinafter “Takano”); and Claims 15-16 are rejected under 35 U.S.C. §103(a) as being obvious in view of GB and Okada, further in view of Japanese Publication No. 2003-0033137 by Kazuyuki Yamashita *et al.* (hereinafter “Kazuyuki Yamashita”).

Takano discloses heating vapor under normal pressure to about 80 to 120 °C. However, Takano *et al.* fail to disclose and teach using the claimed features.

Kazuyuki Yamashita discloses extracting volatile components by steam distillation and obtaining the volatile components after steaming. However, Yamashita *et al.* fail to disclose and teach using the claimed features.

As none of these references correct the deficiencies identified with respect to the rejection of claim 1, Applicants respectfully request that the rejections based on combinations of GB, Okada, Takano, Kazuyuki Yamashita and Kino be withdrawn.

Conclusion

For at least the reasons set forth above, the independent claims are believed to be allowable. In addition, the dependent claims are believed to be allowable due to their dependence on an allowable base claim and for further features recited therein. The application is believed to be in condition for immediate allowance. If any issues remain outstanding, Applicant invites the Examiner to call the undersigned (561-847-7806) if it is believed that a telephone interview would expedite the prosecution of the application to an allowance.

Respectfully submitted,
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